

**Remarks**

Reconsideration and allowance of this application, as amended, are respectfully requested.

Claims 1 and 2 have been amended. Claims 1, 2, 4-7, 9, 11, 13, and 14 remain pending in the application, with claim 7 withdrawn from consideration as being directed to a non-elected invention. Claims 1 and 7 are independent. The rejections are respectfully submitted to be obviated in view of the amendments and remarks presented herein. No new matter has been introduced through the foregoing amendments. Entry of each of the amendments is respectfully requested.

35 U.S.C. § 112, Second Paragraph

Claims 1, 2, 4-6, 9, 11, 13, and 14 stand rejected under 35 U.S.C. § 112, second paragraph.

By way of review, Applicants had amended claims 1 and 2 in the Amendment filed February 2, 2010, with the U.S. Patent and Trademark Office ("USPTO") in response to the objection to the originally-presented terms "greater," "more quickly," "larger," and "normal."

Applicants now again amend claims 1 and 2 as required by the USPTO in order to overcome each instant ground of rejection under § 112, second paragraph.

Thus, instant claim 1 recites in pertinent part that "during a predetermined period of time at a start of the extrusion

process, measured values or information derived from the measured values is made accessible to the computer for a first number of measuring cycles that exceeds a second number of measuring cycles recorded by the thickness-measuring probe in a similar period of time during operation other than during the predetermined period of time."

The claim 1 recitation means of course that more measurements are taken during the start of the extrusion process than are taken during a similar period of time after the start of the process (i.e., during "normal" operation). See, e.g., the disclosure at specification page 4, first paragraph, that "[t]he computer processes, during a predetermined time-frame at the start of the extrusion process, information derived from measured values using or for a greater number of measuring cycles than those recorded by the thickness-measuring probe in a time-frame of similar length during the normal operation."

Instant claim 2 recites in pertinent part that "the thickness-measuring probe is moved along the surface of the extruded film during the predetermined period of time at the start of the extrusion process at a first rate that exceeds a second rate used during operation other than during the predetermined period of time so as to attain the first number of measuring cycles."

The claim 2 recitation means of course that the measuring probe is moved faster during the start of the extrusion process than during a similar period of time after the start of the process

(i.e., during "normal" operation). See, e.g., the disclosure at specification page 4, first paragraph, that "[i]t is advantageous if during a predetermined time-frame at the start of the extrusion process the thickness-measuring probe is moved faster along the extruded film than in the normal operation. This measure makes it possible to determine for each time-unit measured values using a larger number of measuring cycles than the measuring cycles used in the normal operation and to make these accessible to the computer." That is, by moving the measuring probe faster during the start of the extrusion process, it is possible "to attain the first number of measuring cycles."

Accordingly, the rejection under § 112, second paragraph, is respectfully deemed to be obviated.

35 U.S.C. § 112, First Paragraph

Claims 1, 2, 4-6, 9, 11, 13, and 14 stand rejected under 35 U.S.C. § 112, first paragraph.

The ground of rejection based on the "associated with" claim terminology is respectfully deemed to be obviated. Since the Office Action states that "the application's original disclosure provides explicit support for the recited 'similar to'" terminology (Office Action page 3), Applicants have simply restored the "similar" claim language to claim 1.

However, the ground of rejection based on changing "a normal operation" to "an operation other than at the start of the

extrusion process" is respectfully traversed. Again by way of review, Applicants had amended claims 1 and 2 in the Amendment filed February 2, 2010, in response to the objection to the originally-presented "normal" terminology in claims 1 and 2 (see Office Action mailed September 2, 2009, page 3, second paragraph). That is, claims 1 and 2 were amended in order to overcome the USPTO's objection to the "normal" terminology.

Now, in the instant Office Action, the USPTO seems to reverse course, stating that "[t]he originally filed disclosure provides explicit support for the recited 'normal operation'" (Office Action page 4, first full paragraph).

Applicants find the aforementioned discrepancy confusing, but respond as follows. First, in view of the context of the instant specification, Applicants respectfully submit that any person skilled in the art of this invention would readily understand the meaning of the originally-recited "normal operation" terminology. See the disclosure at specification pages 1-4. See the repeated references to the invention's object of controlling the film thickness "at the start of the extrusion process" (for example, at specification page 3, lines 20-24, and again at lines 26-28). Clearly, the term "normal operation" in this context means operation at a time other than during the predetermined time period at the start of the extrusion process.

Nonetheless, Applicants again amend claim 1 so as to even more particularly define the claimed process. As indicated above,

instant claim 1 recites in pertinent part that "during a predetermined period of time at a start of the extrusion process, measured values or information derived from the measured values is made accessible to the computer for a first number of measuring cycles that exceeds a second number of measuring cycles recorded by the thickness-measuring probe in a similar period of time *during operation other than during the predetermined period of time*" (emphasis added). Claim 2 has been amended in a parallel manner. Each of instant claims 1 and 2 fully complies with the written description requirement.

Accordingly, reconsideration and withdrawal of the rejection under § 112, first paragraph, is respectfully requested.

35 U.S.C. § 103(a) - Akasaka

Claims 1, 2, 4-6, 9, 11, 13, and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over European Patent No. 0 329 157 B1 to Akasaka.

The rejection of claims 1, 2, 4-6, 9, 11, 13, and 14 under § 103(a) is respectfully deemed to be obviated. For at least the following reasons, the disclosure of Akasaka would not have rendered obvious Applicants' presently claimed invention.

By way of review, claim 1 defines a process in which "the measured values or the information derived from the measured values originat[es] only from measuring cycles that were recorded in another extrusion process *in which the deviations in the film*

*thickness from the target value lay within an acceptable tolerance range."* As explained at specification page 4, last paragraph, this process feature is advantageous, because "[i]n this manner the control unit can control the device for controlling the film thickness even at the start of the extrusion process in such a way that the thickness profile of the film exhibits the ideal path in the fastest way possible."

The disclosure of Akasaka fails to meet each feature of Applicants' presently claimed invention. The process that results from using Akasaka's controller is different from Applicants' presently claimed process. Akasaka discloses a film thickness controller for an extrusion molding apparatus and a corresponding sheet manufacturing apparatus (page 2, lines 1-2). Akasaka discloses a thickness gauge which is able to detect the thickness of the film at a position downstream of the flowing film (page 4, lines 37-42). A difference between the detected actual thickness values and a set thickness value is calculated by a control device (page 5, lines 6-11). The thickness gauge has a memory device (page 5, lines 12-13) for storing film data that are measured over the entire width of the film (page 5, line 2). Using *the actual and the stored values*, the control device generates control commands for the heaters of the film die to control the temperature of the molten plastic and with it the film thickness.

Applicants' claimed process automatically controls the thickness of an extruded film (specification page 1, first paragraph). The process includes measuring the thickness values of the extruded film, providing statistical values of the film thickness taking into account measured values or information derived therefrom using a definite number of measuring cycles, and generating control commands to a device for controlling the film thickness (specification page 1, first paragraph).

Applicants' claimed process includes recording the measured values or information derived therefrom from other (i.e., previous) extrusion processes (specification page 4, fourth paragraph). During the start of a new extrusion process, a storage unit provides a computer with *only these previously measured values or information derived therefrom, which were recorded when the deviation in the film thickness from the target value lay within acceptable tolerances* (specification page 4, last paragraph).

Akasaka's thickness controller takes recorded thickness values into account, but these values are utilized only together with *actual* thickness values. Akasaka does not control the thickness of the extruded film by taking *only* values into account that were measured during a previous extrusion *in which the deviations in the film thickness from the target value lay within an acceptable tolerance range*. See Applicants' claim 1.

In response to the comments presented in the "Response to Arguments" section of the Office Action (page 10), Applicants note the following. The Office Action relies upon the teaching of Akasaka. But there is no teaching whatsoever in Akasaka, and no stated basis, to support the USPTO's assertion that "it would be obvious . . . to only include measured values or information derived from measured values from measuring cycles that were recorded in another extrusion process in which the deviations in the film thickness from the target value lay within an acceptable tolerance range." Applicants respectfully submit that the asserted conclusion is an *improper* hindsight reconstruction, i.e., one based upon the *Applicants'* disclosure.

The Office Action does not take into account that Akasaka does not address the problem of reducing the deviation in the thickness profile of the web *after starting the extrusion process*. Akasaka deals only with the problem of reducing deviation in the thickness profile during the normal production of the web. Therefore, a person skilled in the art of Applicants' invention would not look to the disclosure of Akasaka in order to solve the object of the instant invention.

Furthermore, in contrast to the interpretation offered in the Office Action (see page 5), the claim 1 phrase "another extrusion process" is not any extrusion process that only differs in time. Applicants disclose that the thickness is controlled after the start of the extrusion process. The phrase "start of the



extrusion process," however, can mean that there has been an interruption in the extrusion. Therefore, during a time period before starting the extrusion process, there has been no extrusion process. During this interruption, the extrusion machine is not operating. Based on Applicants' understanding, however, Akasaka deals only with a running, uninterrupted extrusion process.

To be more precise, Akasaka teaches that only the values back to, for example,  $t=t_{k-2}$  and  $t=t_{k-3}$  are taken into account (see Akasaka page 14, numbered sections (4) and (6)), and page 11, equation (22)). And additionally, since the conditions at the start of the extrusion process are not mentioned, Akasaka does not teach which values are used. Since Akasaka discloses no values, they are, most likely, an initial value such as zero. The aforementioned situation, however, leads to a large thickness deviation at the beginning of the extrusion process -- and this is the problem that is solved by the instant invention. No solution to the problem is presented by Akasaka.

Because of the aforementioned differences, there is simply no teaching in Akasaka that would have led one to modify the reference in a way that would result in the embodiment of the invention defined by Applicants' instant claim 1.

Claims 2, 4-6, 9, 11, 13, and 14 are allowable because they depend, either directly or indirectly, from claim 1, and for the subject matter recited therein.

U.S. Appln. No.: 10/541,363  
Atty. Docket No.: P70704US0

In view of the foregoing, this application is now in condition for allowance. If the examiner believes that an interview might expedite prosecution, the examiner is invited to contact the undersigned.

Respectfully submitted,

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Date: December 22, 2010